

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claims 1-3, 5, 9-10, 15, 22 and 24 to clarify the language and to capture the scope to which the Applicant is entitled; claims 25-26 have been added. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-10, 15, and 22-26 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Response

The Applicant had previously indicated that neither the Bright nor the Ginter reference disclosed a claimed feature and that the reasons for rejection were improper. The Examiner cited *In re Keller* indicating that the test for obviousness "is what the combined teachings of the references would have suggested to those of ordinary skill in the art." The Applicant respectfully points out a more recent decision of a case on appeal to the Board of Patent Appeals, *Ex Parte Orlofsky* (BPAI, 2002,) (*Appeal No. 2000-0377, page 9 and 10*) which states, "Manifestly, if none of the references teach a claimed feature, as shown by addressing the references individually, then the combination of references will also not contain the claimed feature." And *Orlofsky* also states, "While it is true that the references need not expressly state the motivation, the motivation must come from somewhere in the evidence of record, such as the knowledge of one of ordinary skill in the art or in the nature of the problem to be solved. It is not persuasive to just make up a rationale that might fit the circumstances, as the Examiner appears to have done, because the lack of factual support smacks of hindsight."

The Applicant respectfully notes that in the eyes of the BPAI, the fact that the teaching is missing from both pieces of art does indicate that a combination of both pieces of art does not produce the claimed feature.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1-3, 7-10 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US PAT PUB 2002/0169883, hereinafter Bright) in view of Easley (US PAT PUB 2007/0093245). The Applicant has amended the claims to more distinctly and clearly claim the subject matter which Applicant believes is his invention. The Applicant respectfully traverses the Examiner's rejection of these claims.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. **Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations (MPEP 2143).** In that regard, the Applicant respectfully submits that the Examiner's references fail to teach or suggest each and every element of the presently pending independent claims.

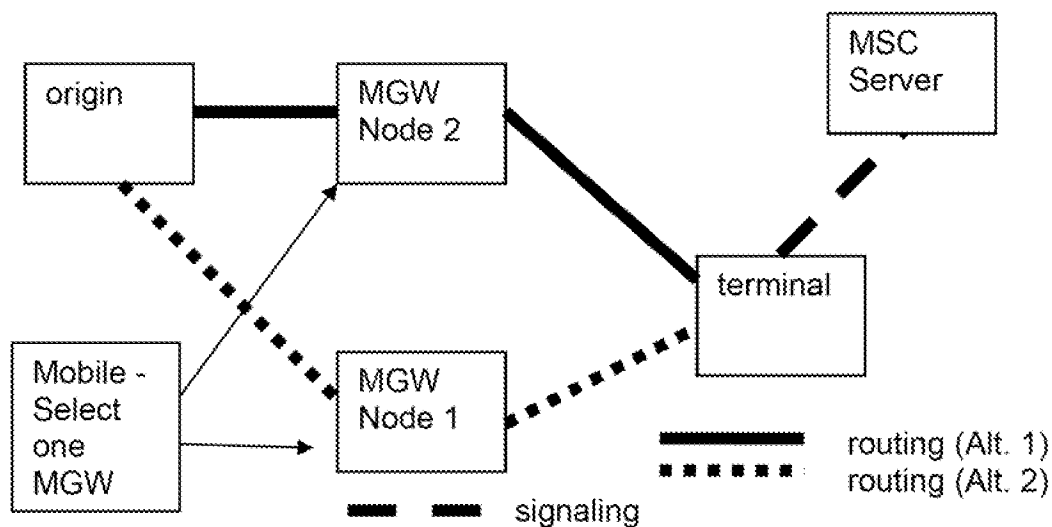
In communication networks, routing based on routing information can be inefficient when considered in terms of network resource utilization in a scenario as illustrated in Figures 2-5 of the present application. Here, a specific user terminal attached to a single MSC Server can be reached via two or more MGWs. Specifically, in Figures 2-5, GMSC 44 would route connectivity plane messages via MGW 28 associated with MSC Server 24 (to which the mobile terminal is attached) regardless of whether or not the mobile terminal is physically located in the same network area as MSC server 24. If the mobile terminal and the MSC server 24 are each located in a different area of the network (i.e., Gothenburg and Malmoe), connectivity plane messages can be routed via at least two MGWs (28 and 36) and this is a waste of network resources.

The present invention exploits the recognition that connectivity plane messages (user data) and network control plane messages (network signaling data) need not be routed together through the same sequence of nodes. The present invention routes a connectivity plane message by taking into account positional information that indicates the geographical location of the mobile terminal. Connectivity messages may be routed

to a mobile terminal through a node selected to minimize system resources while network control messages are sent to the network control plane node that is associated with the mobile terminal via different intermediate nodes. In other words, the present invention teaches reaching a mobile terminal via at least two different routes and the route is selected based on the position/location of the mobile terminal.

Based on the geographical location of the mobile terminal, an MGW is selected. Now, while both MGW 28 and MGW 36 can function as entry point into the split network 12, selection of the MGW 36 entry point is advantageous if the mobile terminal is located in e.g., Malmoe. When MGW 36 is selected for routing connectivity plane messages to the mobile terminal located in the Malmoe area but the mobile terminal is attached to the MSC server 24 in the Gothenburg area, the connectivity plane messages can be directly forwarded by MGW 36 to the RNC 34 and not be transported via MGW 28 (Figure 5 and page 14, lines 19-24).

The following is a high level block diagram of the basic notion of the present invention and is presented to more clearly illustrate the present invention.



To summarize, the present invention teaches sending connectivity messages via specific nodes (e.g., MGWs) along a connectivity plane and basing the route taken by the messages on the location of the mobile terminal, which relates to a controlling component (MSC Server) to which the mobile terminal is attached. The route is chosen according to the most advantageous routing of the connectivity messages.

The Applicant respectfully submits that the cited art, Bright and Easley, does not disclose the limitations in amended claims 1 and 15, either individually or when considered in combination.

The Bright reference is concerned with a processor in a home location register (HLR) capable of handling multiple protocols. There are two networks of different protocols involved and Bright discloses the processor in the HLR constructed to generate network messages according to two network protocols. The cited portion of Bright (para [0059]) is directed to a call from a GSM system terminating in ANSI. An IAM is sent to a mediation device (not present in the present invention) which stores a relayed PRN from the GSM system. The PRN message is converted and sent to the ANSI HLR. Therefore, the Bright reference is directed to changing protocol of a message so that the receiving HLR can read it. Bright is concerned with routing messages/calls with different protocols via the HLR, not routing calls to the mobile terminal from particular nodes as recited in claim 1.

As discussed in the Detailed Action, Bright does not teach IAM containing positional information. The Easley reference is cited for teaching positional information being determined from the routing information (paragraph [0059]). The Applicant respectfully notes that the Applicant's present invention is directed to locating a mobile phone so that messages can be transferred to and from the mobile by a particular node. For instance a mobile terminal traveling in Malmo whose home MSC is in Gothenberg connects to a particular gateway in Malmo that improves efficiency of the call. The cited portion of Easley discloses routing "Laura's call" in a conventional manner that includes use of an IAM. Nowhere in the cited portion is the location or position of Laura mentioned. In fact, nowhere in the Easley reference is physical location of the calling party or the called party mentioned or taught. All 'location' references are related to the operation and use of a Home Location Register of the mobile terminals. As demonstrated, the location of the mobile terminal's MSC is not pertinent to the present invention.

To summarize, the Bright reference does not teach or discuss the use of positional information to determine routing of connectivity plane messages, nor does the

Easley reference. Also, neither the Bright nor Easley references disclose selecting a node from among two or more different nodes that are connected to the mobile terminal and based on the positional information, routing a connectivity plane message through the selected node.

This being the case, the Applicant respectfully asserts that neither Bright nor Easley disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1 and analogous claim 15. Claims 2-3, 7-10 and 18 depend respectively from claims 1 and 15. The Applicant requests the allowance of these claims.

Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US PAT PUB 2002/0169883, hereinafter Bright) and Easley (US PAT PUB 2007/0093245) in view of Baird et al (US PAT 7539179, hereinafter Baird). The Applicant respectfully traverses the rejection of this claim.

The Baird reference is cited for teaching a combined network node comprising an MGW and SGW. The Applicant respectfully submits that the Examiner's references fail to teach or suggest each and every element of the presently pending independent claims 1 and 15. Therefore, the combination of Bright, Easley and Baird do not disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1. The Applicant respectfully requests the allowance of claim 22.

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883, hereinafter Bright) and Ginter (US Patent 5579375) in view of Baird et al (US Patent 7539179, hereinafter Baird). The Applicant respectfully traverses the rejection of this claim.

The Baird reference is cited for teaching the deficiency in the Bright reference, a combined network node comprising an MGW and SGW. The Ginter reference is not discussed in the Detailed Action, so the Applicant is unable to argue the Ginter reference, but the Applicant is confident that Ginter and Baird in combination with the Bright reference do not teach or suggest, individually or in combination, the above

discussed limitations in claim 15 from which claim 23 depends. The Applicant respectfully requests the allowance of claim 23.

Claims 4-6 and 16-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright and Easley as applied to claim 1 above and further in view of Lin (US Patent Publication 2002/0196770). The Applicant respectfully traverses the rejection of these claims.

The Lin reference is cited for disclosing a network with split architecture. The Lin reference does not, however, disclose the limitations that are lacking in independent claims 1 and 15 that are also lacking in the Bright and Easley references. Therefore, the combination of Bright, Easley and Lin do not disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1. The Applicant requests the allowance of claims 4-6 and 16-17.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883) in view of Ginter (US Patent 5579375). The Applicant respectfully traverses the rejection of these claims.

As previously discussed, the Bright reference lacks particular limitations that the Applicant's claim 15 contains. One of those particular limitations is the lack of the use of location/geographical information. Bright makes no mention or teaching or suggestion of the need for the location of a mobile terminal. The Ginter reference is cited for teaching a Location Request message indicating the geographical location of the mobile terminal. The Ginter specification discusses the use of a Location Request message for carrying, e.g., Billing ID and Digits dialed (column 9, lines 62-67). The use of the Location Request message more of a convenience step for Ginter. The Location Request message is used to carry this non-location related information, which is in contradiction with the Applicant's invention, which is directed to providing geographical location information and routing information for the mobile terminal. The Applicant respectfully submits that the Ginter reference combined with the Bright reference fails to disclose the subject limitations and the Applicant respectfully requests the allowance of claim 23.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883) in view of Easley (US Patent Publication 2007/0093245) and Wang et al (US Patent 7180896, hereinafter Wang). The Applicant respectfully traverses the rejection of this claim.

The Wang reference is cited for employing a network control plane and a connectivity plane. The Applicant believes that Wang may be moot regarding the present invention since the Wang reference is an Ericsson reference. However, even though Wang discloses separate planes for control and data, Wang lacks the limitations that are also lacking in Bright and Easley and none of the references, including the Wang reference, teach or suggest the missing limitations. As discussed above, the Bright reference does not teach, suggest or discuss the use of positional information of the mobile terminal to determine routing of connectivity plane messages, nor does the Easley reference. Bright and Easley also do not disclose, individually or in combination, the use of positional information (i.e., as disclosed and claimed by the Applicant). Also, neither the Bright nor the Easley references disclose selecting a node from among two or more different nodes that are connected to the mobile terminal and then, based on the positional information, routing a connectivity plane message through the selected node. The Wang reference also fails to disclose the limitations that are lacking in Bright and Easley. This being the case, the Applicant respectfully requests the allowance of claim 24.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

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